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| TRANSMITTAL FORM (to be used for all correspondence after initial filing) | Application Number | 10/735461-Conf. #3119 |
| | Filing Date | December 11, 2003 |
| | First Named Inventor | Michael P. CZECH |
| | Art Unit | 1635 |
| | Examiner Name | J.B. Ashen |
| Total Number of Pages in This Submission | Attorney Docket Number | UMY-055 |

ENCLOSURES (Check all that apply)

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| <div>Remarks</div> | | |

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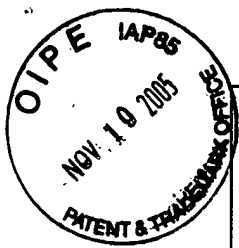
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| Firm Name | LAHIVE & COCKFIELD, LLP | | |
| Signature | | | |
| Printed name | Debra J. Milasincic | | |
| Date | November 8, 2005 | Reg. No. | 46,931 |

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Dated: November 8, 2005 Signature: _____

(Debra J. Milasincic)

Docket No.: UMY-055
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Michael P. Czech *et al.*

Application No.: 10/735461

Confirmation No.: 3119

Filed: December 11, 2003

Art Unit: 1635

For: METHOD OF INTRODUCING siRNA INTO
ADIPOCYTES

Examiner: J.B. Ashen

INFORMATION DISCLOSURE STATEMENT (IDS)

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 12-0080, under Order No. UMY-055. A duplicate copy of this paper is enclosed.

Dated: November 8, 2005

DJM/JAM/mch

Respectfully submitted,

By 

Debra J. Milasincic

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PTO/SB/08a/b (07-05)

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| | | | | Application Number | 10/735461-Conf. #3119 |
| | | | | Filing Date | December 11, 2003 |
| | | | | First Named Inventor | Michael P. CZECH |
| | | | | Art Unit | 1635 |
| | | | | Examiner Name | J.B. Ashen |
| Sheet | 1 | of | 2 | Attorney Docket Number | UMY-055 |

| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|--------------------------|--|--------------------------------|--|---|
| Examiner Initials* | Cite No. ¹ | Document Number | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
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| FOREIGN PATENT DOCUMENTS | | | | | | |
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| NON PATENT LITERATURE DOCUMENTS | | | |
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| | C1 | Alessi, Dario, et al., "3-Phosphoinositide-dependent protein kinase-1 (PKD1): structural and functional homology with the Drosophila DSTPK61 kinase," <i>Current Biology</i> , Vol. 7:776-789 (1997) | |
| | C2 | Brazil, Derek P., et al., "Ten years of protein kinase B signalling: a hard Akt to follow," <i>Trends in Biochemical Sciences</i> , Vol. 26(11):657-664 (2001) | |
| | C3 | Brummelkamp, Thijn R., et al., "A System for Stable Expression of Short Interfering RNAs in Mammalian Cells," <i>Science</i> , Vol. 296:550-553 (2002) | |
| | C4 | Calegari, Federica, et al., "Tissue-specific RNA interference in postimplantation mouse embryos with endoribonuclease-prepared short interfering RNA," <i>PNAS</i> , Vol. 99(22):14236-14240 (2002) | |
| | C5 | Calera, Monica R., et al., "Insulin Increases the Association of Akt-2 with Glut4-containing Vesicles," <i>The Journal of Biological Chemistry</i> , Vol. 273(13):7201-7204 (1998) | |
| | C6 | Chiu, Ya-Lin, et al., "RNAi in Human Cells: Basic Structural and Functional Features of Small Interfering RNA," <i>Molecular Cell</i> , Vol. 10:549-561 (2002) | |
| | C7 | Cho, Han, et al., "Akt1/PKB α Is Required for Normal Growth but dispensable for Maintenance of Glucose Homeostasis in Mice," <i>The Journal of Biological Chemistry</i> , Vol. 276(42):38349-38352 (2001) | |
| | C8 | Cho, Han, et al., "Insulin Resistance and a Diabetes Mellitus-Like Syndrome in Mice Lacking the Protein Kinase Akt2 (PKB β)," <i>Science</i> , Vol. 292:1728-1731 (2001) | |
| | C9 | Cohen, Philip, et al., "The renaissance of GSK3," <i>Molecular Cell Biology</i> , Vol. 2:769-776 (2001) | |
| | C10 | Cross, Darren A.E., et al., "Inhibition of glycogen synthase kinase-3 by insulin mediated by protein kinase B," <i>Nature</i> , Vol. 378:785-789 (1995) | |
| | C11 | Elbashir, Sayda M., et al., "Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured mammalian cells," <i>Nature</i> , Vol. 411:494-498 (2001) | |
| | C12 | Harrison, Scott A., et al., "Insulin Regulation of Hexose Transport in Mouse 3T3-L1 Cells Expressing the Human HepG2 Glucose Transporter," <i>The Journal of Biological Chemistry</i> , Vol. 265(33):20106-20116 (1990) | |
| | C13 | Hill, Michelle M., et al., "A Role for Protein Kinase B β /Akt2 in Insulin-Stimulated GLUT4 Translocation in Adipocytes," <i>Molecular and Cellular Biology</i> , Vol. 19(11):7771-7781 (1999) | |
| | C14 | Kohn, Aimee D., et al., "Expression of a Constitutively Active Akt Ser/Thr Kinase in 3T3-L1 Adipocytes Stimulates Glucose Uptake and Glucose Transporter 4 Translocation," <i>The Journal of Biological Chemistry</i> , Vol. 271(49):31372-31378 (1996) | |

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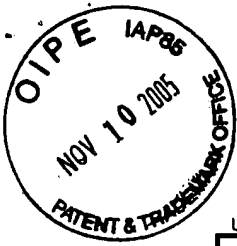
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| | | Art Unit | 1635 | | |
| | | Examiner Name | J.B. Ashen | | |
| Sheet | 2 | of | 2 | Attorney Docket Number | UMY-055 |

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| C15 | Kotani, Ko, et al., "Requirement of Atypical Protein Kinase C λ for Insulin Stimulation of Glucose Uptake but Not for Akt Activation in 3T3-L1 Adipocytes," <i>Molecular and Cellular Biology</i> , Vol. 18(12):6971-6982 (1998) | |
| C16 | Lee, Nan Sook, et al., "Expression of small interfering RNAs targeted against HIV-1 rev transcripts in human cells," <i>nature biotechnology</i> , Vol. 19:500-505 (2002) | |
| C17 | Lewis, David L., "Efficient delivery of siRNA for inhibition of gene expression in postnatal mice," <i>nature genetics</i> , Vol. 32:107-108 (2002) | |
| C18 | McManus, Michael T., "Gene silencing using micro-RNA designed hairpins," <i>RNA</i> , Vol. 8:842-850 (2002) | |
| C19 | Miyagishi, Makoto, et al., "U6 promoter-driven siRNAs with four uridine 3' overhangs efficiently suppress targeted gene expression in mammalian cells," <i>nature biotechnology</i> , Vol. 19:497-500 (2002) | |
| C20 | Okabe, Masataka, et al., "Translational repression determines a neuronal potential in Drosophila asymmetric cell division," <i>Nature</i> , Vol. 411:94-98 (2001) | |
| C21 | Paddison, Patrick J., et al., "Short hairpin RNAs (shRNAs) induce sequence-specific silencing in mammalian cells," <i>Genes & Development</i> , Vol. 16:948-958 (2002) | |
| C22 | Paul, Cynthia P., et al., "Effective expression of small interfering RNA in human cells," <i>nature biotechnology</i> , Vol. 29:505-508 (2002) | |
| C23 | Scherr, Michaela, et al., "Gene Silencing Mediated by Small Interfering RNAs in Mammalian Cells," <i>Current Medicinal Chemistry</i> , Vol. 10:245-256 (2003) | |
| C24 | Sharp, Phillip A., "RNA interference - 2001," <i>Genes & Development</i> , Vol. 15:485-490 (2001) | |
| C25 | Spiller, David G., et al., "Improving the Intracellular Delivery and Molecular Efficacy of Antisense Oligonucleotides in Chronic Myeloid Leukemia Cells: A Comparison of Streptolysin-O Permeabilization, Electroporation, and Lipophilic Conjugation," <i>Blood</i> , Vol. 91(12):4738-4746 (1998) | |
| C26 | Sui, Guangchao, et al., "A DNA vector-based RNAi technology to suppress gene expression in mammalian cells," <i>PNAS</i> , Vol. 99(8):515-5520 (2002) | |
| C27 | Summers, Scott A., et al., "Differentiation-dependent Suppression of Platelet-derived Growth Factor Signaling in Cultured Adipocytes," <i>The Journal of Biological Chemistry</i> , Vol. 274(34):23858-23867 (1999) | |
| C28 | Tuschl, Thomas, "Expanding small RNA interference," <i>nature biotechnology</i> , Vol. 20:446-448 (2002) | |
| C29 | Ueki, Kohjiro, et al., "Potential Role of Protein Kinase B in Insulin-induced Glucose Transport, Glycogen Synthesis, and Protein Synthesis," <i>The Journal of Biological Chemistry</i> , Vol. 273(9):5315-5322 (1998) | |
| C30 | Wang, Qinghua, et al., "Protein Kinase B/Akt Participates in GLUT4 Translocation by Insulin in L6 Myoblasts," <i>Molecular and Cellular Biology</i> , Vol. 19(6):4008-4018 (1999) | |
| C31 | Williams, Michayla R., et al., "The role of 3-phosphoinositide-dependent protein kinase 1 in activating AGC kinases defined in embryonic stem cells," <i>Current Biology</i> , Vol. 10:439-448 (2000) | |
| C32 | Yu, Jenn-Yah, et al., "RNA interference by expression of short-interfering RNAs and hairpin RNAs in mammalian cells," <i>PNAS</i> , Vol. 99(9):6047-6052 (2002) | |
| C33 | Zeng, Yan, et al., "Both natural and Designated Micro RNAs Can Inhibit the Expression of Cognate mRNAs When Expressed in Human Cells," <i>Molecular Cell</i> , Vol. 9:1327-1333 (2002) | |

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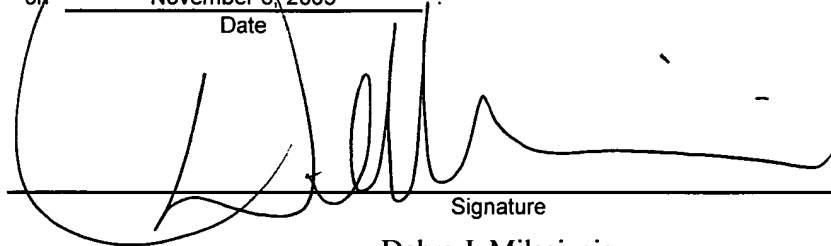
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